

several ovules in free central placentation, terminating into 3 feebly distinct styles. Fruit capsule with persistent sepals bearing several seeds; seeds minute (275-325  $\mu\text{m}$ ), pyramidal, seed wall protrudes warty processes. Embryo curved (Fig. 1A-J). The specimens are deposited at Garhwal University Herbarium, Srinagar (GUH).

**Flowers and Fruits:** March-May.

**Holotype:** 12807A GUH, R.D. Gaur, 16 April 1991. Sanana, Almora, Uttar Pradesh, India, 1400 m a.s.l. **Isotype:** GUH 12807B, C, D, E, R.D. Gaur, 16 April 1991. Sanana, Almora, Uttar Pradesh, India.

**Distribution and Ecology:** Annual herb of open moist agricultural fields, associated with moss and small herbs. The specimens

described were collected from Sanana, Almora district of Uttar Pradesh. The species is named after Professor V. Puri.

*Sagina purii* sp. nov. is allied to *Sagina saginoides* (L.) Karsten, but can be easily distinguished by its filiform moss-like habit, leaf sheath with knobbed hairs, tetramerous flower, and petals which are larger than the sepals. (c.f. in other tetramerous species petals are either absent or smaller than sepals).

#### ACKNOWLEDGEMENTS

I thank Dr N.C. Majumdar, Ex-Deputy Director, Botanical Survey of India, Calcutta for his expert comments and Latin diagnosis of the taxon.

## A NEW INOPEPLID SPECIES (COLEOPTERA: CUCUJOIDEA) FROM PATKOI HILL RANGE OF ARUNACHAL PRADESH<sup>1</sup>

T.K. PAL<sup>2</sup>

(With two text-figures)

A new Inopeplid species, *Inopeplus patkoicus* sp. nov. is described from the Patkoi hill range of Arunachal Pradesh, bringing the total number of Indian species of the genus to 10. A key to the Indian species of *Inopeplus* is included.

#### INTRODUCTION

Inopeplidae is a small, predominantly tropical family of cucujoid beetles. Subsequent to Crowson's (1955) recognition of the group as a distinct family, Sengupata, Pal and Mukhopadhyay (1977), Pal and Dutta (1982) and Pal (in press) described six species bringing the Indian species of the family to nine, recorded mostly from subtropical forest zones and tropical foot hills of Himalaya as well as from peninsular and insular parts of India. Pal (loc. cit.) recorded six species of this family from Arunachal Pradesh, collected from the Himalayan part of India's easternmost state.

Recently during field work in the Patkoi hill range of Arunachal Pradesh, the beetles of this family were noticed in woodlands near the Pangsau Pass, very close to the Burmese border. This reveals the possibility of occurrence of this primarily wood-inhabiting form in similar contiguous forest areas of the neighbouring country. This region is a component of the Assam-Burma Geological province which was a part of the Tethys sea in the Archean period. Repeated orogenic activity till early Pleistocene raised the upland to its present status (Singh 1989). The *Inopeplus* material, under study, is strikingly different from all known Indian species.

***Inopeplus patkoicus* sp. nov.** (Figs. 1, 2)

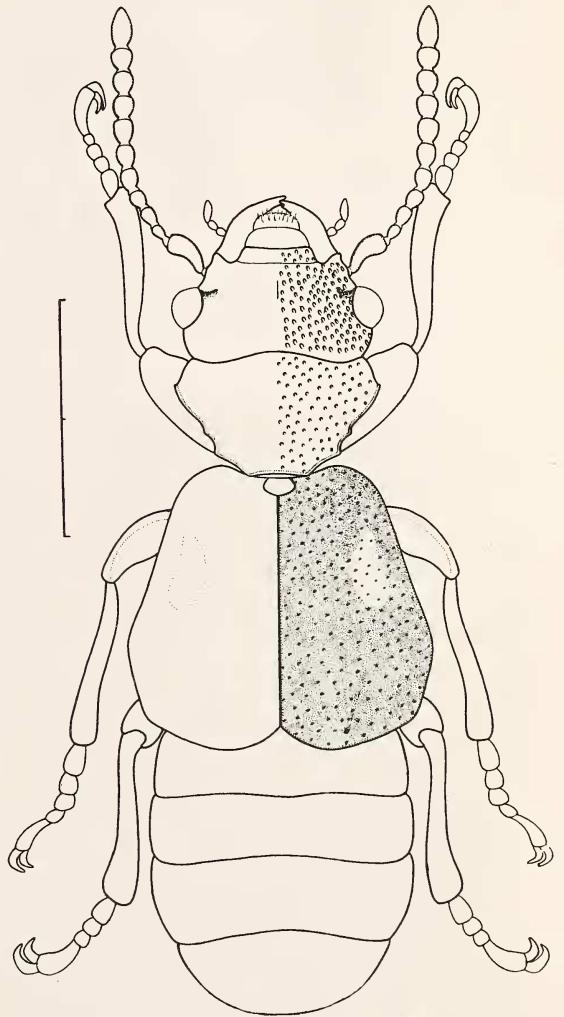
General appearance (Fig. 1) elongated, flattened, shiny, blackish, elytra with pale

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KEY TO THE INDIAN SPECIES OF  
*Inopeplus* SMITH

1. Head and prothorax reddish ..... 2
- Head and prothorax dark brown to deep black .... 3
2. Elytra blackish with a whitish rounded spot on each elytron, abdominal segments 4 and 5 exposed ..... *biocellatus* (Motschulsky)
- Elytra entirely black and without any spot, abdominal segment 2 partly and segments 3 to 5 completely exposed ..... *nitidus* Sengupta, Pal & Mukhopadhyay
3. Lateral margin of prothorax smooth ..... 4
- Lateral margin of prothorax with two to three distinct denticles ..... 8
4. Head across eyes distinctly wider than prothorax, pedicel and segment 3 of antenna distinctly shorter and narrower than other segments; lateral margin of pronotum broadly bordered.....  
..... *distinctus* Sengupta, Pal & Mukhopadhyay
- Head across eyes slightly narrower or about as broad as prothorax, pedicel and segment 3 of antenna about as long as segments 4-10 but slightly narrower; lateral margin of pronotum finely bordered ..... 5
5. Elytra entirely metallic black, last two abdominal segments exposed .....  
..... *nigricorpus* Sengupta, Pal & Mukhopadhyay.
- Blackish elytra partially whitish or pale-coloured ..... 6
6. Anterior half of elytra paler and posterior half blackish; only last three abdominal segments completely exposed; puncturation on vertex minute, roundish with interspaces distinctly wider .....  
..... *andamanicus* Pal & Dutta
- Elytra blackish along its entire length with pale rounded spots: one or two pairs; more than last three abdominal segments exposed; puncturation on vertex coarse-elongate with interspaces narrower or about as wide as punctures ..... 7
7. Two pairs of pale spots on elytra: one in both anterior and posterior halves; last three and half abdominal segments exposed, lateral margin of prothorax gradually narrowed and not markedly sinuate in posterior third; antennal segments slightly elongate and appear somewhat filiform ..... *jairajpurii* Pal
- One pair of pale spots on posterior half of elytra; last four abdominal segments completely exposed; lateral margin of prothorax abruptly narrowed and distinctly sinuate in posterior third; antennal segments about as broad as long and distinctly moniliform ..... *apatani* Pal
8. Lateral margin of prothorax with two posterior denticles ..... *albonotatus* (Motschulsky)
- Lateral margin of prothorax with one anterior denticle in addition to two posterior denticles ..... 9
9. A whitish longitudinal spot from base to near apex of each elytron; last three abdominal segments exposed; male genitalia with parameric lobes divergent apically .....  
..... *decisus* (Walker)
- An oblong sublateral longitudinal whitish spot on anterior half of each elytron; last four abdominal segments exposed with parameric lobes convergent apically ..... *patkoicus* sp. nov

Fig. 1. *Inopeplus patkoicus* sp. nov., dorsal view (Scale 1 mm).

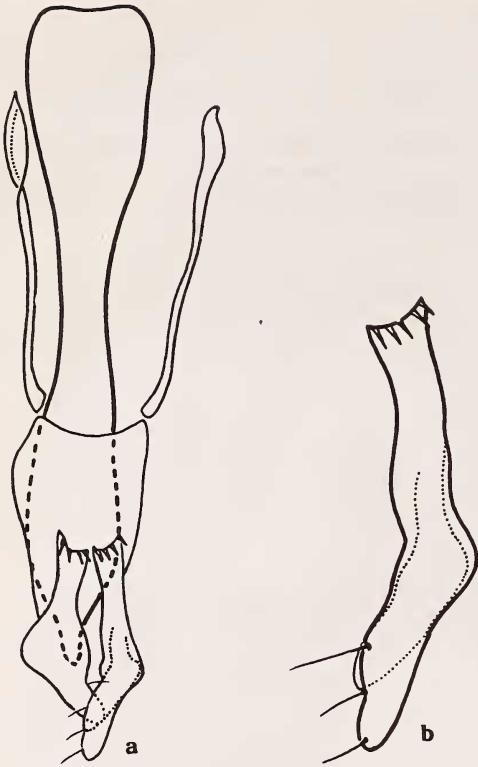


Fig. 2. Aedeagus of *Inopeplus patkoicus* sp. nov.  
a. Dorsal view, b. Enlarged view of right paramere.

spots, last four abdominal segments exposed.

Head broader than long, apical margin truncate, fronto-clypeal suture distinct and nearly straight, apical margin of frons with transverse depression, a feeble medio-longitudinal impression on vertex; puncturation on vertex little elliptical, coarse and dense, interspaces about as wide as punctures near middle and closer posteriorly towards sides; eyes moderately large and finely faceted, a semicircular depression surrounding inner margin of eye less distinct, a short oblique depression arises near antennal base. Antenna moderately long and slender, scape moderately large and curved, pedicel shorter and narrower than scape, segment 3 slightly wider and longer than pedicel, segments 4-10 subequal and little elongate, segment 11 elongate and acuminate at apex; antenna unicolorous, blackish.

Prothorax triangularly transverse, flattened, widest across anterior teeth and narrowed posteriorly; lateral margin with one anterior and two posterior denticles, finely bordered from base to anterior teeth; puncturation on pronotum roundish, finer and sparser than on vertex, interspaces wider than punctures. Scutellum transverse, rounded at apex, impunctate.

Elytra about as broad as long, broadened posteriorly, puncturation fine and sparse; an elongate ovate sublateral pale spot on anterior half of each elytron, the margin of which less distinct; last four abdominal segments exposed.

Ventral surface shiny, fine punctures only on head and prothorax. Aedeagus (Fig. 2a, b) with gradually narrowed and broadly pointed apex of median lobe; parameres broad, foot-shaped and bilobed, a few setae at apex.

This species resembles *I. albonotatus* (Motschulsky) and *I. decisus* (Walker) but can be differentiated from the former species by the presence of an anterior denticle in addition to two posterior denticles on lateral margin of prothorax; apical lobes of paramere less pronounced with fewer setae. This species can be differentiated from *decisus* in having different pattern of elytral spots, more exposed abdominal segments, and in the structure of parameres being distinctly different.

**Measurements of holotype:** Total length 3.65 mm, width of head across eyes 0.85 mm, length of antenna 1.25 mm, length and width of prothorax 0.52 and 0.80 mm, length and width of elytra 1.24 and 1.26 mm.

**Holotype male, INDIA:** Arunachal Pradesh, Changlang district, Nampong, 300 m, 9 March 1990, T.K. Pal, ex. under bark; aedeagus dissected, mounted on cover slip and pinned with the holotype (Zoological Survey of India, Calcutta; A.P.F.S. Regd. No. AIV/1).

**Etymology:** The species is named after the hill range of north-eastern India from where it is reported.

## ACKNOWLEDGEMENTS

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facilities to carry out this work.

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FIRST RECORD OF GENUS *APROCEROS* MALAISE  
(HYMENOPTERA, SYMPHYTA: ARGIDAE) FROM INDIA,  
WITH DESCRIPTION OF A NEW SPECIES<sup>1</sup>

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(With six text-figures)

A new species of *Aproceros*, i.e. *A. sikkimensis* sp. nov. has been described and illustrated. This represents the first record of this genus from India. So far only four species of this genus are known.

## INTRODUCTION

Erected by Malaise (1931), the genus *Aproceros* is represented by only four species so far. Except the type species *Aproceros umbricola* from Siberia (Vladivostok), all the other species are known from Japan. The genus has the following characters: head broad and short, very strongly narrowed behind eyes (Fig. 4); flagellum in the female cylindrical, as long as the width of head; clypeus almost truncate (Fig. 5); inner margin of eyes almost parallel and distance between them nearly twice as long as the length of one eye; projection of the cheeks twice as long as the diameter of ocellus; forewing (Fig. 2) without intercostal crossvein and its radial field is open at the end, hindwing with two closed middle cells (Fig. 3). This is the first report of *Aproceros* from India. The description of *Aproceros sikkimensis* sp. nov.

is also given.

*Abbreviations used:* A = Anal cell, AST = Anterior subbasal tooth, Ax = Axillus vein, B = Brachial cell, C = Costa, C1...4 = Cubital cells, CL = Clypeus, CN = Cenchri, D = Discoidal cell, EL = Eye length, FLG = Flagellum, IATS = Inner apical tibial spur, IDMO = Interocular distance at the level of median ocellus, LB = Labrum, LID = Lower interocular distance, M = Median cell, MB = Metabasitarus, OATS = Outer apical tibial spur, OCL = Ocello-occipital line, OOL = Oculo-ocellar line, P = Posterior cell, PED = Pedicel, POL = Postocellar line, PST = Posterior subbasal tooth, R = Radial cell, S = Submedian cell, SB = Subcosta, SCP = Scape, St = Stigma.

*Aproceros sikkimensis* sp. nov. Figs. 1-6.

FEMALE: Colour: Body black, maxillary and labial palpi brown; all legs except outer sides of all coxae, basal halves of pro- and mesofemora yellow; wings subhyaline; costa,

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